



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,108	04/23/2001	Richard Petrus Kleihorst	PHNL-000153	2822
24737	7590	01/05/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			COUSO, YON JUNG	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/830,108	Applicant(s) KLEIHORST ET AL.	
	Examiner Yon Couso	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's arguments filed September 15, 2004 have been fully considered but they are not persuasive.

a. The objection made to the abstract has been withdrawn.

b. The objection made to the disclosure has been withdrawn.

c. The rejection made under 35 USC 101 has been withdrawn in response to the amendment.

d. The applicant argues that the Monroe fails to teach that the blocks are scanned for a maximum row number and a maximum column number as is recited in the claims. The examiner disagrees. Monroe discloses scanning and transmitting significant coefficients values in an order of decreasing bit plane significance (page 7, algorithm at top of page); wherein for each bit plane the step of scanning and transmitting is performed in a rectangular scan zone (Fig 3, the full 8x8 block, note that a square is a type of rectangle) starting from a corner of the block, wherein Rmax represents a maximum row number and Cmax represents a maximum column number and are determined as the outermost positions of the determination of newly significant coefficients within each bit plane (63 in figure 3 is the outermost position of this rectangular scan zone).

e. The applicant argues that there is no suggestion or motivation and there is no reasonable expectation of success in combining Monroe and Yamamitsu. The examiner disagrees. Even though Monroe does not expressly disclose selecting and transmitting dimensions of a rectangular scan zone, Yamamitsu teaches in Fig 5 and page 453, first paragraph of section 3.2, selecting and transmitting dimensions of a rectangular scan

zone. Monro and Yamamitsu are combinable because they are both from the art of transmission of DCT coefficients. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Yamamitsu's transmission of a rectangular scan zone as Monro's coefficient addresses. The suggestion/motivation for doing so would have been to compress many of the zero values easily (Yamamitsu, end of 1st paragraph of section 3.2). Therefore, it would have been obvious to combine Yamamitsu with Monro to obtain the invention as specified.

f. The applicant states on page 13 in the Remarks that the claims 11 and 13 depend from claims 10 and 12. The claims 11 and 13 are independent.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, 7, 11, 12, 14, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Monro (WO 98/37700, cited in IDS filed 19 June 2002).

In regards to claim 1, Monro discloses a method (Fig 1) of coding a signal comprising blocks of values to obtain a scalable bit-stream, the method comprising the steps of: representing each block as a sequence of bit planes (Fig 2, and page 6, line 14), wherein most significant bits of the values form a most significant bit plane (page 6, line 15), and respective less significant bits of the values form respective less significant bit planes (page 6, line 16); and scanning and transmitting significant coefficients values in an order of decreasing bit plane significance (page 7, algorithm at top of page);

wherein for each bit plane the step of scanning and transmitting is performed in a rectangular scan zone (Fig 3, the full 8x8 block, note that a square is a type of rectangle) starting from a corner of the block, wherein R_{max} represents a maximum row number and C_{max} represents a maximum column number and are determined as the outermost positions of the determination of newly significant coefficients within each bit plane (63 in figure 3 is the outermost position of this rectangular scan zone).

In regards to claim 2, Monro further discloses on page 5, line 20, the values are transform coefficients.

In regards to claim 3, Monro further discloses on page 4, line 7, and page 8, line 22, the coding being performed on each block individually to obtain respective scalable bit-streams for respective individual blocks.

In regards to claim 6, Monro further discloses on page 4, line 8, a scalable bit stream being obtained by cyclically and sequentially scanning selected parts of the respective scalable bit streams of the respective individual blocks.

In regards to claim 7, all the limitations have been addressed in the argument of claim 1.

In regards to claim 14, Monro discloses a scalable bit-stream comprising blocks of values (Fig 2), the values for each block being available in an order of decreasing bit plane significance (page 6, line 14) and for each bit plane scanned in a rectangular scan zone (Fig 3, the full 8x8 block, note that a square is a type of rectangle) starting from an upper left corner of the block, wherein R_{max} represents a maximum row number and C_{max} represents a maximum column number and are determined as the outermost

positions of the determination of newly significant coefficients within each bit plane (63 in figure 3 is the outermost position of this rectangular scan zone).

In regards to claim 15, all the additional limitations are addressed in the argument of claim 14 above.

In regards to claim 11, all the limitations are obvious as pertaining to the corresponding method of decoding to claim 1's method of encoding.

In regards to claim 12, all the limitations are obvious as pertaining to the corresponding decoder to claim 7's encoder.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro (WO 98/37700), as applied to claim 1, in combination with Yamamitsu et al (*An Experimental Study for a Home-Use Digital VTR*, cited in IDS filed 19 June 2002).

In regards to claim 4, Monro further discloses the step of scanning a transmitting comprising: initially marking all values insignificant (page 7, lines 8-16); and performing the following steps for each bit-plane until a stop criterion is met (algorithm at top of page 7): transmitting a bit for each significant value in a current bit plane (page 7, lines 17-20); transmitting an indication whether or not any insignificant values become newly significant in the current bit plane (page 7, line 25-28); and selecting and transmitting addressing information representative of newly significant values in the current bit plane

(paragraph bridging pages 9 and 10), followed by an indication for each not previously significant value inside the scan zone whether the value has become newly significant (page 10, lines 3-8) and a sign bit for each newly significant value (page 10, lines 12-13).

Monro does not expressly disclose selecting and transmitting dimensions of a rectangular scan zone. Yamamitsu teaches in Fig 5 and page 453, first paragraph of section 3.2, selecting and transmitting dimensions of a rectangular scan zone. Monro and Yamamitsu are combinable because they are both from the art of transmission of DCT coefficients. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Yamamitsu's transmission of a rectangular scan zone as Monro's coefficient addresses. The suggestion/motivation for doing so would have been to compress many of the zero values easily (Yamamitsu, end of 1st paragraph of section 3.2). Therefore, it would have been obvious to combine Yamamitsu with Monro to obtain the invention as specified.

In regards to claim 5, both Monro (page 11, lines 12-17) and Yamamitsu (in the second paragraph of section 3.2) further disclose parts of the bit stream representing the newly significant values are entropy encoded.

4. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro (WO 98/37700), as applied to claim 7, in combination with Jiankun Li et al (*An embedded DCT approach to progressive image compression*, cited in the IDS filed 19 June 2002).

In regards to claim 8, Monroe discloses an encoder comprising: a device as claimed in claim 7 (see the argument of claim 7).

Monro does not expressly disclose a truncator for truncating the scalable bit-stream at a certain bitrate. However, Monro teaches on page 8, lines 15-16, that transmission may be stopped part-way through if transmission time is limited and/or limited bandwidth is available, and on page 13, lines 14-15, the coder being instructed to keep sending bits until a certain compression target has been reached.

Jiankun Li teaches in the paragraph bridging the first and second columns on page 202 a truncator for truncating a scalable bit-stream at a certain bitrate. Monro and Jiankun Li are combinable because they are both from the art of transmission of DCT coefficients. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Jiankun Li's truncator into Monro's encoder. The suggestion/motivation for doing so would have been to regulate the transmission if limited bandwidth is available (Monro, lines 15-16) and to easily achieve rate-control (Jiankun Li, paragraph bridging the first and second columns on page 202). Therefore, it would have been obvious to combine Jiankun Li with Monro to obtain the invention as specified.

In regards to claim 13, all the limitations are obvious as pertaining to the corresponding receiver to claim 8's encoder.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monro (WO 98/37700), as applied to claim 7, in combination with Kleihorst et al (*Implementation of DCT-domain motion estimation and compensation*, newly cited).

In regards to claim 9, Kleihorst discloses an encoder (Fig 1b and Fig 5) comprising: a device (Fig 1b, DCT); and a memory for storing a previous frame (Fig 1b, Loop Memory); the device being arranged to furnish the bit-stream to the memory (Fig 1b, Fig 5, and page 58 Memory Control Aspects).

Kleihorst does not expressly disclose the device as claimed in claim 7 or the bit stream as scalable. Monro teaches the device as claimed in claim 7 (see argument of claim 7) and the bit stream being scalable (see argument of claim 7). Monro and Kleihorst are combinable because they are both from the art of transmission of DCT coefficients. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Monro's device as Kleihorst's DCT. The suggestion/motivation for doing so would have been to reveal an image as soon as transmission commences (Monro, page 13, line 24). Therefore, it would have been obvious to combine Monro with Kleihorst to obtain the invention as specified.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monro and Jiankun Li, as applied to claim 8, in further combination with Fujikawa et al (U.S. Patent 4,972,260, cited in IDS filed 19 June 2002).

In regards to claim 10, Fujikawa discloses a camera system (Fig 20) comprising: a camera (ref no 20, Fig 20); and an encoder (ref no 24, Fig 20).

Fujikawa does not expressly disclose the encoder as claimed in claim 8 or 9. Monro and Jiankun Li teach the encoder as claimed in claim 8 (see the argument of claim 8). Fujikawa, Monro, and Jiankun Li are combinable because they are from the art of image transmission. It would have been obvious to one of ordinary skill in the art at

the time of the invention to incorporate Monroe and Jiankun Li's encoder as part of Fujikawa's camera system. The suggestion/motivation for doing so would have been to provide an improved method of image compression (Monro, page 1, line 20). Therefore it would have been obvious to combine Monroe and Jiankun Li with Fujikawa to obtain the invention as specified.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe and Kleihorst, as applied to claim 9, in further combination with Fujikawa et al (U.S. Patent 4,972,260, cited in IDS filed 19 June 2002).

In regards to claim 10, Fujikawa discloses a camera system (Fig 20) comprising: a camera (ref no 20, Fig 20); and an encoder (ref no 24, Fig 20).

Fujikawa does not expressly disclose the encoder as claimed in claim 8 or 9. Monroe and Kleihorst teach the encoder as claimed in claim 9 (see the argument of claim 9). Fujikawa, Monroe, and Kleihorst are combinable because they are from the art of image transmission. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Monroe and Kleihorst's encoder as part of Fujikawa's camera system. The suggestion/motivation for doing so would have been to provide an improved method of image compression (Monro, page 1, line 20). Therefore it would have been obvious to combine Monroe and Kleihorst with Fujikawa to obtain the invention as specified.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

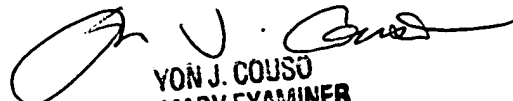
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/830,108
Art Unit: 2625

Page 11

YJC

January 3, 2005


YON J. COUSO
PRIMARY EXAMINER